

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1-10 (Cancelled).

11. (Currently Amended): An impurity disposal system for removing and disposing impurities contained in a target gas, comprising:

an impurity removing unit that removes an impurity gas from the target gas while the target gas is in a gaseous state;

a compressing unit that compresses the impurity gas to produce compressed impurity gas;

a drying unit that removes water from the compressed impurity gas to produce a dried compressed impurity gas; [[and]]

a disposing unit that disposes the dried compressed impurity gas into an underground aquifer; and

a driving unit configured to drive the compressing unit.

12. (Previously Presented): The impurity disposal system according to claim 11, wherein the target gas includes natural gas.

13. (Previously Presented): The impurity disposal system according to claim 11, wherein the target gas includes a mixture of gas and oil.

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14. (Previously Presented): The impurity disposal system according to claim 11, wherein the impurity gas includes carbon dioxide.

15. (Previously Presented): The impurity disposal system according to claim 11, wherein the impurity gas includes hydrogen sulfide.

16. (Cancelled).

17. (Currently Amended): The impurity disposal system according to claim ~~[[16]]~~ 11, wherein the driving unit includes a gas turbine.

18. (Currently Amended): The impurity disposal system according to claim ~~[[16]]~~ 11, wherein the driving unit includes a gas engine.

19. (Currently Amended): The impurity disposal system according to claim ~~[[16]]~~ 11, wherein the driving unit includes a steam turbine.

20. (Currently Amended): The impurity disposal system according to claim ~~[[16]]~~ 11, further comprising:

a carbon dioxide removing apparatus that removes carbon dioxide produced by the driving unit; and

a mixing unit that mixes the carbon dioxide with the impurity gas, wherein compressing unit compresses a mixture of the carbon dioxide and the impurity gas.

21. (Previously Presented): The impurity disposal system according to claim 17, wherein the gas turbine includes a boiler that recovers a waste heat discharged from the gas turbine, wherein steam produced by the boiler is used for a heat source during removal of impurities.

22. (Previously Presented): The impurity disposal system according to claim 18, wherein the gas engine includes a boiler that recovers a waste heat discharged from the gas engine, wherein steam produced by the boiler is used for a heat source during removal of impurities.

23. (Currently Amended): A method of removing and disposing impurities contained in a target gas, comprising:

removing an impurity gas from the target gas while the target gas is in a gaseous state;

compressing the impurity gas to produce compressed impurity gas;

removing water from the compressed impurity gas to produce a dried compressed impurity gas; and

disposing the dried compressed impurity gas into an underground aquifer, wherein

the compressing is performed by a driving unit.

24. (Previously Presented): The method according to claim 23, wherein the target gas includes natural gas.

25. (Previously Presented): The method according to claim 23, wherein the target gas includes a mixture of gas and oil.

26. (Previously Presented): The method according to claim 23, wherein the impurity gas includes carbon dioxide.

27. (Previously Presented): The method according to claim 23, wherein the impurity gas includes hydrogen sulfide.

28. (Previously Presented): The method according to claim 23, wherein the compressing is performed using a gas turbine.

29. (Previously Presented): The method according to claim 23, wherein the compressing is performed using a gas engine.

30. (Previously Presented): The method according to claim 23, wherein the compressing is performed using a steam turbine.

31. (Previously Presented): The method according to claim 23, further comprising:
removing carbon dioxide produced by a device that drives a compressor that performs the compressing; and

mixing the carbon dioxide with the impurity gas, wherein the compressing includes compressing a mixture of the carbon dioxide and the impurity gas.

32. (Previously Presented): The method according to claim 23, further comprising:
collecting steam produced by a boiler that recovers a waste heat discharged from the gas turbine; and

using the steam as a heat source during removal of impurities.